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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/081,629	02/20/2002	Steven J. Taylor	03004.009800	1916

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EXAMINER

EGAN, BRIAN P

ART UNIT	PAPER NUMBER
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1772

DATE MAILED: 07/02/2003

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/081,629

Applicant(s)

TAYLOR, STEVEN J.

Examiner

Brian P. Egan

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) 12-18 is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-11 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Election/Restrictions

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:
 - I. Claims 1-11, drawn to a reinforced composite material, classified in class 428, subclass 105.
 - II. Claims 12-18, drawn to a method of forming a reinforced composite material, classified in class 156, subclass 322.

The inventions are distinct, each from the other because of the following reasons:

2. Inventions I and II are related as process of making and product made. The inventions are distinct if either or both of the following can be shown: (1) that the process as claimed can be used to make other and materially different product or (2) that the product as claimed can be made by another and materially different process (MPEP § 806.05(f)). In the instant case the product as claimed can be made by another and materially different process. For example, the laminate panel need not be heated and compressed nor does the laminate panel need to be adhered to the strengthening panel. Instead, the laminate panel may be cold formed or formed under normal room temperature conditions. Furthermore, the strengthening panel may be adhered to the laminate panel rather than vice versa.
3. Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.

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4. Because these inventions are distinct for the reasons given above and the search required for Group II is not required for Group I, restriction for examination purposes as indicated is proper.

5. During a telephone conversation with Mr. Leonard Diana, a provisional election was made without traverse to prosecute the invention of group I, claims 1-11. Affirmation of this election must be made by applicant in replying to this Office action. Claims 12-18 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claims 1-6, 8, and 10-11 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by JP 57-176160 (hereinafter JP ‘160).

JP ‘160 discloses a reinforced composite material comprising a laminate panel (“PVF resin sheet” – see Abstract), a strengthening panel (“glass fiber reinforced unsaturated polyester resin sheet” – see Abstract), and a layer of adhesive disposed between the laminate panel and the strengthening panel to adhere the laminate panel and the strengthening panel together (see Abstract). The strengthening panel comprises a polyester plastic copolymer sheet embedded with glass fibers, i.e. fiberglass (“glass fiber reinforced unsaturated polyester” – see Abstract).

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8. Claims 1-6, 8, and 10-11 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Chung et al. (#4,923,756).

Chung et al. disclose a reinforced composite material comprising a laminate panel ("first unprimed FRP, SMC, or plastic substrate" – Col. 3, lines 13-14), a strengthening panel ("second unprimed FRP, SMC, or plastic substrate" – Col. 3, lines 14-15), and a layer of adhesive disposed between the laminate panel and the strengthening panel to adhere the laminate panel and the strengthening panel together (Col. 3, lines 15-26). The strengthening panel comprises a polyester plastic copolymer sheet embedded with glass fibers, i.e. fiberglass ("FRP" (fiberglass reinforced polyester) – Col. 3, lines 55-57).

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over JP '160 in view of Shaw et al. (#4,643,940).

JP '160 teaches a reinforced composite material as detailed above. JP '160 is silent as to whether the fiberglass particles are oriented in a mesh or randomly oriented. It is notoriously well known in the reinforced composite art, however, to randomly orient fiberglass particles as evidenced by Shaw et al. (see Abstract). Thus, depending on the desired end product, it would have been obvious to one of ordinary skill in the art to modify JP '160 by randomly orienting the

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fiberglass fibers as taught by Shaw et al. Furthermore, it would have been obvious to one of ordinary skill in the art at the time Applicant's invention was made to either arrange the fiberglass in a random orientation or mesh-type structure since it has been held that rearranging parts of an invention involves only routine skill in the art. *In re Japikse*, 86 USPQ 70.

11. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Chung et al. ('756) in view of Shaw et al. (#4,643,940).

Chung et al. teach a reinforced composite material as detailed above. Chung et al. are silent as to whether the fiberglass particles are oriented in a mesh or randomly oriented. It is notoriously well known in the reinforced composite art, however, to randomly orient fiberglass particles as evidenced by Shaw et al. (see Abstract). Thus, depending on the desired end product, it would have been obvious to one of ordinary skill in the art to modify Chung et al. by randomly orienting the fiberglass fibers as taught by Shaw et al. Furthermore, it would have been obvious to one of ordinary skill in the art at the time Applicant's invention was made to either arrange the fiberglass in a random orientation or mesh-type structure since it has been held that rearranging parts of an invention involves only routine skill in the art. *In re Japikse*, 86 USPQ 70.

12. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over JP '160 in view of Votolato et al. (US 2001/0054264).

JP '160 teaches a reinforced composite material as detailed above. JP '160 further teaches an adhesive composition comprising a cured unsaturated polyester resin of bisphenol type, vinyl ester resin, or oligoacrylate ester (see Abstract) but fails to explicitly state whether the aforementioned resin types are hot melt adhesives. It is notoriously well known in the reinforced

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composite art, however, to select a known adhesive type depending on the desired end product as detailed by Votolato et al. Votolato et al. teach that in the formation of high pressure laminates (see p.1, paragraph [0003]), adhesive types may be selected from the group consisting of water-based contact adhesives, solvent-based contact adhesives, epoxy and cyanoacrylate adhesives, and hot melt adhesives (see p.1, paragraph [0005]) depending on the desired end product.

Therefore, it would have been obvious to one of ordinary skill in the art to have substituted the polyester adhesive of JP '160 with a functionally equivalent hot melt adhesive as taught by Votolato et al. depending on the desired end product. Furthermore, it would have been obvious to one of ordinary skill in the art to modify the adhesive of JP '160 to include a hot melt adhesive since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious optimization. *In re Leshin*, 125 USPQ 416.

13. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Chung et al. ('756) in view of Votolato et al. (US 2001/0054264).

Chung et al. teach a reinforced composite material as detailed above. Chung et al. further teach an adhesive composition comprising a prepolymer and an aliphatic isocyanate (Col. 3, lines 15-26) but fail to explicitly state whether the aforementioned adhesive is a hot melt adhesive. It is notoriously well known in the reinforced composite art, however, to select a known adhesive type depending on the desired end product as detailed by Votolato et al. Votolato et al. teach that in the formation of high pressure laminates (see p.1, paragraph [0003]), adhesive types may be selected from the group consisting of water-based contact adhesives, solvent-based contact adhesives, epoxy and cyanoacrylate adhesives, and hot melt adhesives (see

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p.1, paragraph [0005]) depending on the desired end product. Therefore, it would have been obvious to one of ordinary skill in the art to have substituted the adhesive of Chung et al. with a functionally equivalent hot melt adhesive as taught by Votolato et al. depending on the desired end product. Furthermore, it would have been obvious to one of ordinary skill in the art to modify the adhesive of Chung et al. to include a hot melt adhesive since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious optimization. *In re Leshin*, 125 USPQ 416.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brian P. Egan whose telephone number is 703-305-3144. The examiner can normally be reached on M-F, 8:30-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Harold Y. Pyon can be reached on 703-308-4251. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9310 for regular communications and 703-872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.


BPE
June 26, 2003


HAROLD PYON
SUPERVISORY PATENT EXAMINER
1772

6/27/03